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Top 10 Market Themes for 2016

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In our inaugural *Global Markets Analyst,* we present 10 themes that inform our 2016 market views.

Our top ten themes are:

1. **Global growth: More stable than it looks**
2. **US inflation: Less downside risk than is priced**
3. **DM Monetary Policy: Divergence**
4. **Oil prices: Near-term downside risk, year-end upside**
5. **Relative value in commodities: OpEx over CapEx**
6. **Global saving glut: In reverse**
7. **US equity upside: Limited by the 'Yellen call'**
8. **EM risk: Slowdown, not meltdown**
9. **Market liquidity: The 'new normal' is less**
10. **Corporate earnings: Only a temporary loss of mojo**

Top 10 Market Themes for 2016

Growth has consistently disappointed over the past several years, but this has not prevented risky assets from increasing substantially. In 2016, we expect activity to continue to expand in the advanced economies, led mostly by the consumer. But high valuations and rising rates, especially in the US, will present challenges for risky assets. As a result, investment opportunities next year will be centred around rotation between markets and across sectors. In short: more alpha than beta.

Over 2016 we expect inflation to realize above market expectations, which are overly conservative in our view. This will dictate the pace of increases in nominal bond yields. Our central forecast calls for more divergence in short rates across the G10 (as the Fed hikes and the ECB and BoJ ease), higher bond yields across the board, and steeper curves. By contrast, we are constructive on corporate credit spreads over the balance of the year.

In FX markets, our strongest view in 2016 is further Dollar strength against the G10 currencies. Valuations of EM FX have cheapened very substantially over the past three years. In the coming year, we expect EM currencies to be stable on a trade-weighted basis, particularly where imbalances have corrected.

In commodities, risks to prices for energy and industrial metals are skewed to the downside in the near term. But, looking at the balance of 2016 our strongest theme remains "lower for longer". We prefer exposure to commodities related to operational expenditure (such as oil) over commodities tied to capital expenditure (such as copper).

Below we present 10 themes that inform these views and are likely to drive markets through 2016.

1. Global growth: More stable than it looks

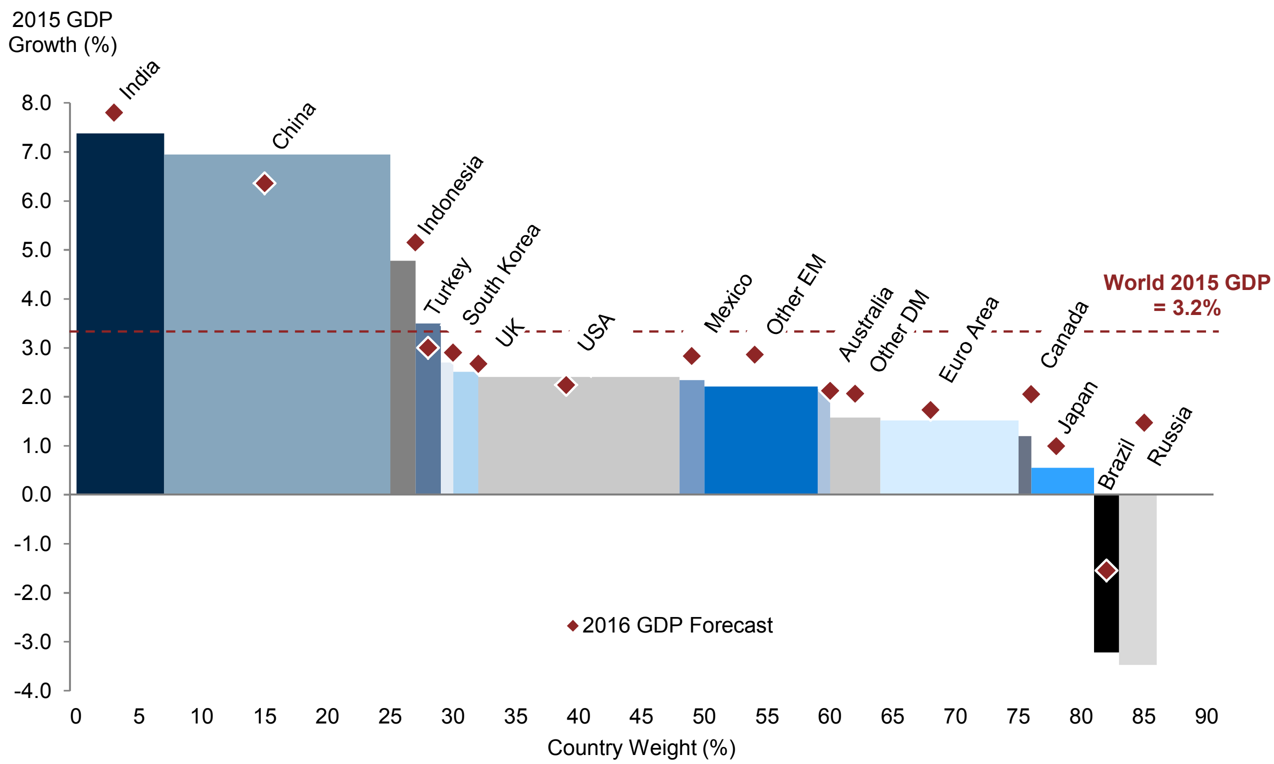
In our new economic forecasts for 2016, outlined in yesterday's *Global Economics Analyst* ('A Stealthy Path to Full Employment', Nov. 18, 2015), our economics team expects modest improvements in global GDP next year. Having bottomed at what we think will prove to be a post-crisis low of 3.2% in 2015, they forecast global GDP to rise to 3.5% in 2016.

Exhibit 1 shows how this global growth improvement breaks down across countries. A large part of it will come from countries currently in recession, namely Brazil and Russia. Small improvements will also come from Europe and Japan, which we forecast to grow at 1.7% and 1.0% (from 1.5% and 0.6% previously), while the US will decelerate slightly (to 2.2% from 2.4%) and China will see a somewhat larger deceleration (to 6.4% from 7.0%).

For investors, the relative stability of the growth outlook for both DM and EM economies should be sufficient to offset concerns about the downside risks implied by this year's slowdown in global manufacturing activity, tightening of US financial conditions and prospective rate hikes by the Fed. In our view, the industrial slowdown was only a transitory soft patch, reflecting the sharp capital expenditure cuts in the energy and mining sectors as well as reform efforts in China aimed at rebalancing GDP demand away from fixed investment.

Stable growth in 2016 should also help dispel concerns that the US and DM economies are stuck in a period of 'secular stagnation'. Indeed, while economic forecasters and investors have been surprised to the downside on GDP growth over the past several years, they have been equally surprised to the upside on the pace of labor market improvements. Average unemployment rates across the G7 have fallen more sharply in this recovery than in any recovery since the 1970s. While these negative data surprises for GDP growth raise important questions about the supply side of the economy, the positive data surprises for labor market indicators suggest that the recovery on the demand side of the economy has been surprisingly strong.

Exhibit 1: Our global GDP forecasts for 2015 (bar chart) and 2016 (diamonds)



Source: Goldman Sachs Global Investment Research.

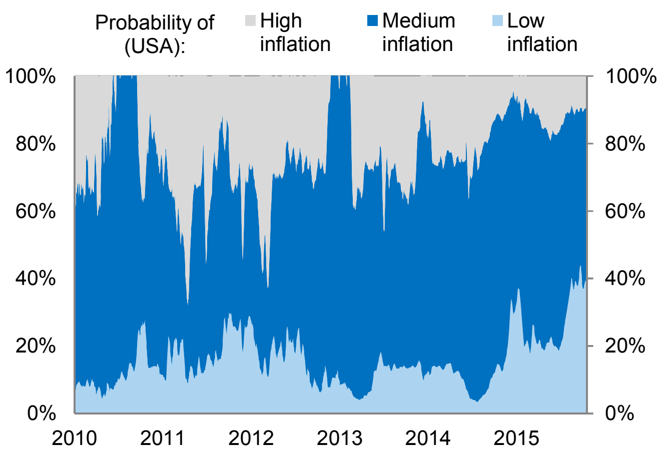
2. US inflation: Less downside risk than is priced

Economic slack is running out. The extent to which this is true varies widely across the G7 economies, but they're all running out, and the average G7 unemployment rate is now less than 100bp above its 30-year lows. The depletion of slack is most advanced in the US, where headline unemployment currently stands at 5.0% and is expected to fall to 4.6% by the end of 2016. These are levels of unemployment not seen in the US since the summer of 2007, and we expect this will go a long way towards convincing bond markets that deflation risk is much lower than is priced. It is also likely that upside inflation risk will reprice, too, although as we point out below, our conviction is lower here than for the mispricing of deflation risk.

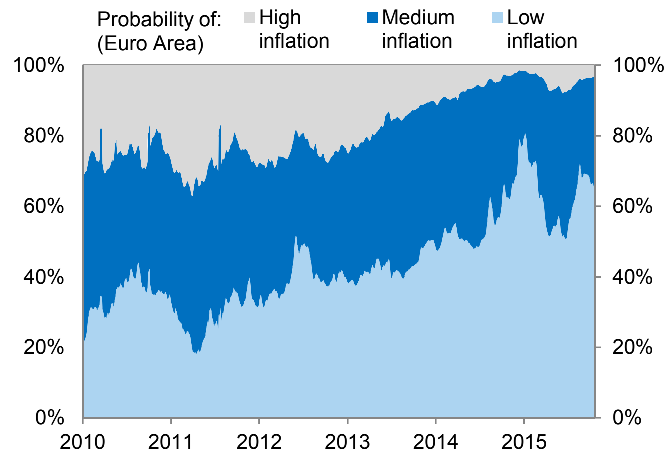
Expectations of low inflation will also be challenged by base effects in oil prices, which will add to inflation in 2016 just as they subtracted from it in 2015. The price of WTI oil, for example, has recently fallen below $42/bbl, and while our Commodities team thinks the near-term risks to prices remain skewed to the downside, they continue to believe that the supply and demand adjustments being forced by cheap oil will support the market at $52/bbl by the end of 2016. Thus, in sharp contrast to the loose intuition that 'low commodity prices are deflationary', commodity price inflation could easily exceed 20% next year.

As US unemployment rates reach our forecast of 4.6%, we expect to see an unwind of the deflation premium that is still priced into rates and inflation markets. Exhibit 2 shows that the option-implied probability of 5-year inflation rates in the US falling below 1% remains surprisingly high at 38%. And while Europe will take longer to reach full employment than the US, we do not think this justifies the 65% probability of 5-year inflation in the Euro area remaining below 1% (Exhibit 2). As these option-implied probabilities show, markets are pricing far more downside risk to inflation that we think likely.

Exhibit 2: Option-implied probabilities of "lowflation" are too high in the US and Europe
Plots show option-implied probabilities of 5-year inflation rates by range: low (≤1%), medium (1%-3%), or high (≥3%).



Source: Bloomberg, Goldman Sachs Global Investment Research.



Source: Bloomberg, Goldman Sachs Global Investment Research.

Across DM economies more generally, we expect rising inflation rates to refocus investors on the fact that inflation has not, in fact, gone dormant – that Phillips curve relationships between inflation and measures of slack production capacity are still viable, and warrant higher premiums for inflation risk than is currently being priced. Our forecasts anticipate headline CPI inflation in 2016 will reach 1.8% in the US, 1.1% in the Euro area, and 0.3% in Japan. In 2017, we expect these rates to increase to 2.4%, 1.6%, and 1.5%, respectively. In most DM economies, especially the Euro area and Japan, this will still mean core inflation below the central bank's target, but the gap would be significantly smaller than now. And deflation fears would most likely fade into memory.

Inflation is likely to pick up across most EM economies as well. The important exceptions are Russia, which will likely see a sharp drop, and potentially Brazil, which could see disinflation in the later part of 2016. The fading disinflationary impulse from lower oil is relevant here too, but in addition the significant currency depreciations across much of the EM world in 2015 will add to the inflationary impulse as well. As a result, central banks across EM – especially in Turkey, South Africa and the Andes – will face a trickier balancing act between supporting growth and keeping inflation in check.

3. DM Monetary Policy: Divergence

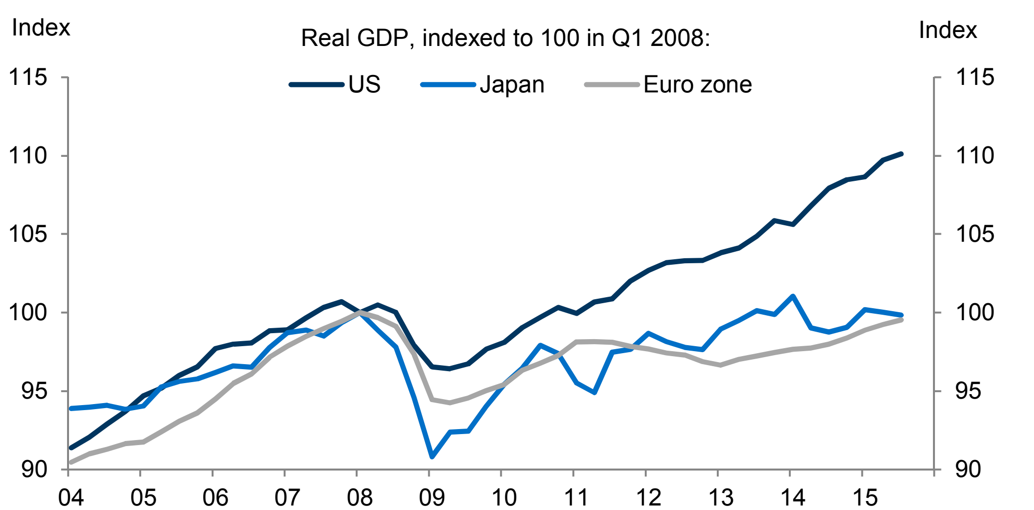
We expect all DM economies to grow in 2016, but the US will be the first to grow GDP demand above potential. Exhibit 3 compares the indexed level of real GDP for the US, Europe and Japan, and makes clear why this will happen: on average, the US has been fasting growing DM economy for several years in a row. It is for this reason that members of the FOMC in the US are preparing to exit zero policy rates, while central bankers in the Euro Area and Japan are likely preparing to extend monetary stimulus.

The ongoing US recovery and diminishing slack in the labour market will drive a Fed tightening cycle – almost certainly starting in December – that will ultimately prove to be more hawkish than the market expects in light of our forecasts for a faster pick-up in inflation. We think the US Dollar will be the main beneficiary of this tightening cycle. While one of the lessons of 2015 is that the Fed will likely be cautious about giving a green light to large and rapid USD appreciation, the resilience of the US economy in the face of the substantial Dollar appreciation since mid-2014 gives us confidence that the Fed will ultimately tolerate further Dollar strength as it tightens policy through 2016.

And in contrast, we think both the ECB and the BoJ still have heavy-lifting to do through policy easing. The fragility of the recoveries in the Euro area and Japan, the weaker starting point for inflation and inflation expectations, and the higher sensitivity to a China-led EM slowdown imply that the stance of monetary policy from the ECB and BoJ will stay dovish as the Fed begins to normalize rates. Weaker currencies vs the Dollar are the natural consequence – renewed easing from the ECB and BoJ, including lower rates and flatter curves, should encourage further portfolio shifts among domestics into risk assets and out of the Euro and the Yen, with rising risk-free returns in the US benefiting the Dollar.

We forecast a roughly 20% appreciation in the Dollar versus the G10 currencies by end-2017. Our 12-month forecast for EUR/$ remains 0.95, but we think there is a significant probability that this level is reached sooner given the potential for the ECB to ease aggressively in December. As far as the Yen goes, our 12-month forecast remains 130, a level that could again be reached sooner.

Exhibit 3: US growth has outpaced the Euro area and Japan



Source: Haver, Goldman Sachs Global Investment Research.

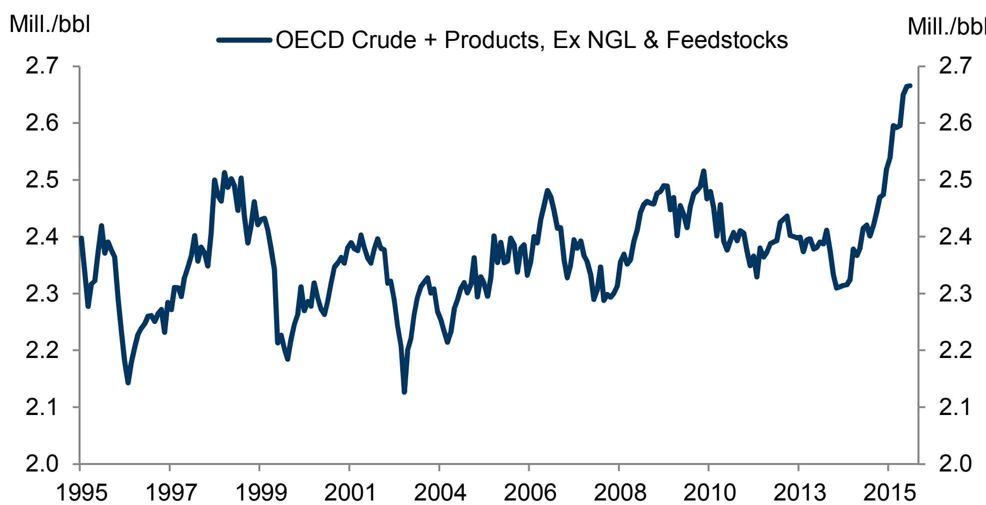
4. Oil prices: Near-term downside risk, year-end upside

In late 2014, when oil prices began to fall sharply, our Commodities team developed the framework of the 'New Oil Order' to explain how the transition to the 'exploitation' phase of the supply cycle would likely shape commodity prices over the next decade ('The new oil order: OPEC loses pricing power, shale shifts to the margin', *Commodities Research,* Oct. 26, 2014). Over the course of 2015, oil demand was spectacularly strong, especially in light of the modest slowing in global growth, but the supply surprise was even larger, the result of which was an even greater decline in oil prices than we originally forecast.

One remarkable fact in hindsight is the extent to which shale's relatively low-cost and (dramatically) shorter development cycle has increased the supply of non-shale producers. With the advent of shale, the role of 'swing producer' transferred from a few large producers with market power (such as Saudi Arabia) to a fragmented competitive market of price-takers (North American shale producers). Efforts to raise prices by withholding supply would now be met by increased supply from shale, thereby neutralizing the upward pressure on prices. While the basic outlines of this new strategic dynamic were already visible in the fall of 2014 (see the Oct. 26, 2014, report above), it has nonetheless been remarkable to witness how significantly the supply incentives of former-monopolists have increased.

On our Energy team's most recent estimates of marginal cost for shale, WTI oil prices rise to $52/bbl by the end of 2016. Moreover, between now and the end of 2016, there is a growing risk that oil inventories could swell to full capacity (Exhibit 4). On current trends, our team does not expect the limits of storage capacity to be reached. But there is always the risk that demand will unexpectedly fall short (or that supply will surprise), at which point the only way to clear the excess supply in the physical market for oil is with sharp price declines ('The New Oil Order: Too full for comfort', *Commodities Research*, Oct. 25, 2015). Given the high exposure to the energy sector in global credit markets (most notably in EM and US high-yield), this downside risk to oil is among our top downside risks to credit and risky assets more generally.

Exhibit 4: Oil inventories are at record levels, implying elevated downside risk to prices



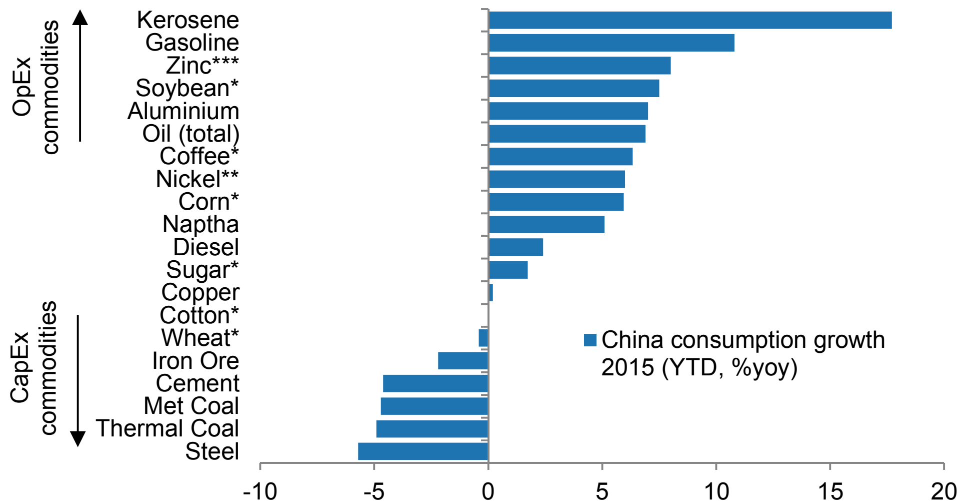
Source: IEA through Sep 2015 and thereafter - DOE Weeklies for US, PAJ weeklies for Japan, Euroil for Europe.

5. Relative value in commodities: OpEx over CapEx

For 2016, we expect the 'lower for longer' theme for commodity prices to continue, but with the additional 'demand tilt'. Namely, that China's efforts to rebalance demand from investment to consumption should reduce demand for CapEx commodities (such as steel, cement, and iron ore) much more than it reduces demand for OpEx commodities (such as energy and aluminum). Indeed, energy demand in China continues to rise, not fall, and our analysis of cross-country historical data reveals that this demand rotation is typical, and permanent, for countries at China's current level of income per capita ('What China's rebalancing means for commodities', *Commodities Research*, Oct. 12, 2015).

The cost economics of many CapEx commodities will further differentiate their price behavior from oil over the next several years. Unlike the new 'swing production' being supplied by shale, many CapEx commodities are produced by mining technologies with high fixed costs and low marginal costs. The decision to shut down a mining facility (taking supply off the market) can entail substantial shutdown costs, and these costs can imply a willingness to continue operating even when prices fall below variable operating costs. Though logical, the operating decisions implied by this cost structure imply that a higher level of value destruction is required to remove production capacity from the market. In the oil market, by contrast, the swing capacity provided by shale helps to reduce this tendency. For this reason, given our "lower for longer" in commodities, our sector views in credit take a more favorable view of energy than metals and miners.

Exhibit 5: OpEx commodities outperforming CapEx commodities



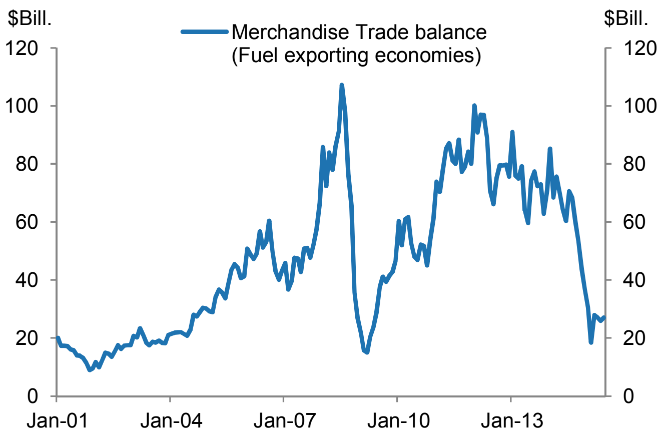
**Estimated 2015 annual consumption growth (no monthly data)*
***calculated from apparent stainless steel demand*
****calculated from zinc galv. production*
Source: IEA, WoodMackenzie, CRU, USDA, Goldman Sachs Global Investment Research.

6. Global saving glut: In reverse

One of the more remarkable features of the pre-crisis economic landscape was the spike in oil prices to levels that (for WTI) briefly exceeded $140/bbl. And as early as 2005, then Fed Governor Ben Bernanke was talking about the effects that high oil prices were having on the fixed income market via what he dubbed 'the global savings glut' ('The global savings glut and the US current account deficit', speech given to Virginia Association of Economists, March 10, 2005). Oil prices at that point had only just passed $50/bbl. But over the subsequent few years, oil prices nearly tripled, and investors became highly focused on the recycling of global petrodollar savings through the global financial system. The resulting search for yield that these flows fueled would later be blamed for many of the ensuing credit market excesses. Even in real time, market observers such as Alan Greenspan were noting the strong correlation between the growth of US mortgage debt and the US current account deficit ('Current account', speech given to Advancing Enterprise 2005 Conference, London, Feb. 4, 2005).

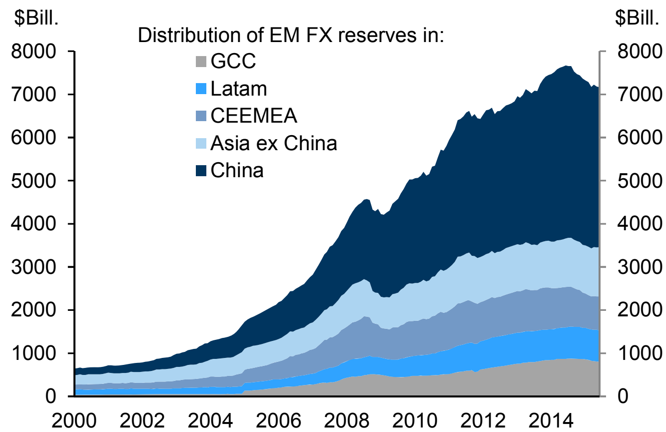
Exhibit 6 shows the merchandise trade surplus of the 17 largest fuel-exporting economies as identified by the IMF's direction of trade statistics. The surges in petrodollar savings in the pre- and post-crisis periods are clearly visible. Equally visible, if less remarked upon, is the recent collapse of petrodollar savings following the collapse of global energy prices. In addition, Exhibit 7 shows the EM FX reserves, too, appear to have peaked (another source of saving cited by Bernanke). In our view, these savings declines are bearish for rates, just as they were arguably bullish for rates during the pre-crisis period. We are particularly drawn to the view that 'lower for longer' oil and commodity prices will reallocate global income from savers to consumers, thus draining one of the main contributors to the 'global savings glut' identified in Bernanke's famous speech.

Exhibit 6: Petrodollar saving flows have collapsed…



Source: IMF, Haver Analytics.

Exhibit 7: …and EM FX reserves appear to have peaked



Source: IMF COFER, Haver Analytics, Goldman Sachs Global Investment Research.

The puzzle, then, is why we haven't seen more of an impact in fixed income markets. Part of the answer, we think, is the offsetting reduction in the *demand* for saving caused by the collapse in global CapEx spending in the energy and other commodity sectors. Global investment demands on saving were also likely reduced by policy reforms in China aimed at shifting demand from investment to consumption (China's current account surplus has increased sharply over the past year and a half). If both saving supply and investment demand curves are shifting left in parallel fashion, then this may explain why it has (so far) been hard to see the long-run effects on fixed income markets. Over time, this narrative suggests a transitory effect on investment but a permanent effect of savings. The decline of the savings glut ought to become more visible as global consumption and investments reassert themselves.

7. US equity upside: Limited by the 'Yellen call'

We see limited upside to equities in 2016. Our US Portfolio Strategy team has a 2016 price target of 2,100 for the S&P 500, suggesting a very modest return of 5% (from current levels). Their framework assumes that 1) earnings per share will rise 10.1%, driven partly by 'base effects' in the energy sector and partly by improvements in global growth more generally, but that 2) the price-earnings multiple will fall approximately 5% (to 16.3x from 17.1x), as typically happens during rate-hike cycles. And, due to the delayed timing of rate hikes, the downside risk to price-earnings multiples is probably greater this year because the positive growth surprises that would normally accompany rate hikes are arguably behind us. Since our US GDP forecast envisions mild deceleration in 2016, equities and other risky assets will likely bear the brunt of rate hikes without the usual buffer of better growth data.

We also see a risk that the 'Bernanke put' will gradually be replaced by the 'Yellen call'. The 'Bernanke put' captured the intuition that when the risks to growth, inflation and market sentiment are skewed to the downside and the Fed has an easing bias, monetary policy reacts aggressively to bad news. Now that these risks have receded, we expect the Fed will shift to a tightening bias, implying that monetary policy will likely begin to react more aggressively to good news. The inflection point for this shift to a tightening bias will arguably arrive in 2016, beyond which rallies in risk sentiment may be met by less accommodative monetary policy – the 'Yellen call'.

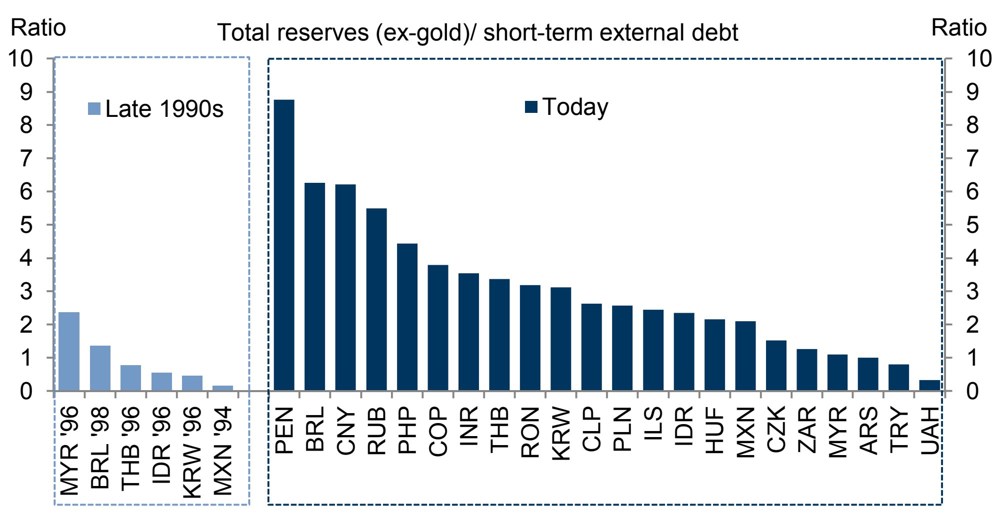
In contrast to the US, Europe and Japan are both further from the full-employment level of GDP. Indeed, the ECB and BoJ still have an aggressive bias, and our Economics teams in Europe and Japan expect more easing in 2016 rather than less. In other words, the Draghi and Kuroda 'puts' are still active, which in our view implies more technical support for risky assets in these markets than in the US. We also see more room for GDP growth to surprise expectations to the upside since GDP slack in these economies is greater. In credit, this theme is one reason (among others) why we prefer Europe over the US.

8. EM risk: Slowdown, not meltdown

Like most investors, we are worried about debt overhang in the EM economies, particularly in China where the debt-to-GDP ratio has increased by nearly 100 percentage points since the global financial crisis. Even after excluding China, EM debt-to-GDP has climbed from pre-crisis levels of less than 100% to record highs above 110%. While it is normal for debt-to-GDP ratios to rise as financial markets deepen, this post-crisis acceleration of credit growth rightly raises concerns about the burden of this debt on growth. Now that it has become clear that commodity prices will remain 'lower for longer', and furthermore that China's economy will continue to slow due to structural reforms, these concerns have taken on added urgency ('The EM Credit Cycle Part 2: Varying paths of deleveraging', *Emerging Markets Analyst*, Nov. 13, 2015).

The full effects of lower-for-longer oil prices will continue to be felt for some time in the oil-producing economies. But in EMs like Russia and Mexico, where currency depreciation has helped absorb the terms-of-trade shock, the remaining adjustments to government and private-sector balances should be correspondingly less painful. We are more concerned about places with pegged exchange rates (such as Nigeria and Saudi Arabia), where the burden of adjustment falls more squarely on government fiscal balances, domestic households and corporates (and in the limit, the exchange rate peg may itself be at risk). And, of course, pressures on both groups of EMs will rise materially in the event that oil prices fall further – to the $20/bbl downside risk scenario outlined by our Commodity team.

Exhibit 8: EM reserves in far better shape than the late 1990s
Ratio of total reserves ex gold to short-term external debt



Source: IMF, Haver Analytics, Goldman Sachs Global Investment Research.

We think these forces are likely to keep EM growth at a sub-par level, but an EM meltdown is not inevitable because the nature of the EM challenge is different. Much of the EM borrowing in this cycle is denominated in local currency (of course, there are pockets of hard-currency exposures); hence, EM economies are less vulnerable to the traditional crisis model involving the 'original sin' of hard currency sovereign borrowing. Reserve buffers are also more significant this time around. This means that the real challenge is navigating a poor growth outlook with large relative price shifts, and the institutional capacity to do this.

9. Market liquidity: The 'new normal' is less

One of the more perplexing market developments of the post-crisis era has been the palpable loss of liquidity in fixed income markets, especially in less liquid asset classes like corporate credit. The issue is controversial, not least because commonly used measures of market liquidity (like bid-ask spreads) suggest that liquidity is back to pre-crisis levels. This interpretation of the data is rejected by market participants, most of whom react to this view by volunteering anecdotes that illustrate the difficulty of selling or sourcing bonds in the secondary markets.

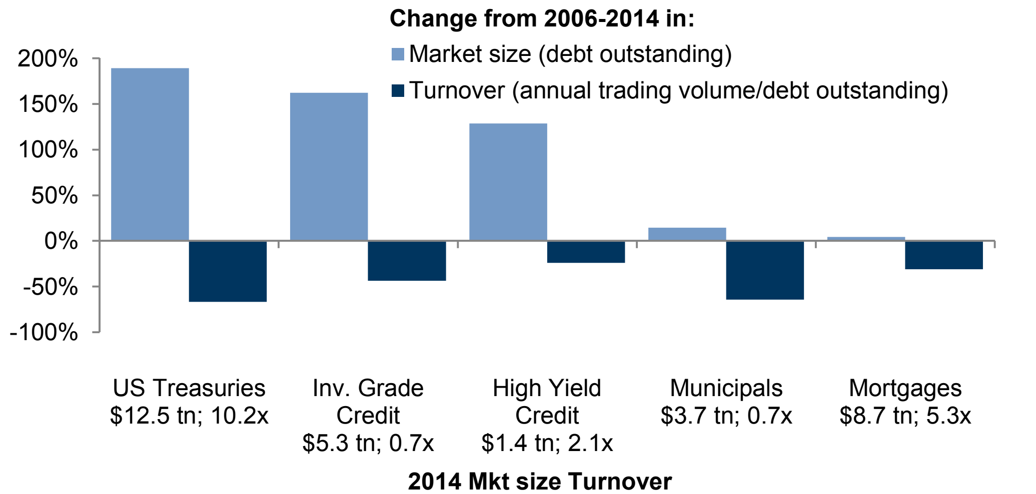
The argument that "regulation did it" is too simple, in our view. While we strongly agree that many new market regulations inadvertently increased the cost of market making, we also see important non-regulatory factors playing a role. For example, new technology has made the post-trade information that has long been available via TRACE reporting more readily available to market participants. Since post-trade transparency makes it harder to exit intermediated risk positions with a non-negative P&L, it makes it harder to intermediate trades on a "principal" basis. In our view, this is one of the reasons why larger fractions of trades are now being intermediated on an agency basis. In practice, 'working' the trade by shopping it around before crossing it is less desirable from the investor's perspective because it takes longer and more likely moves price against the trade. Regulation per se did not cause this problem, but it could help mitigate its detrimental effects with new rules like delaying the reporting of block trades.

Post-crisis declines in the liquidity of single-name CDS are another reason why the cost of hedging principal trades has increased. This, too, is only partly regulatory in nature, but is another good example where new regulation could contribute to market liquidity. For example, we believe that mandating central clearing for single name CDS could both expand the investor base and reduce the trading costs. And indeed, this is already required by Dodd-Frank. But the rules have yet to be implemented, leaving the future outlook for this important hedging instrument hanging in limbo.

Finally, the economic efficiency of hedged positions has also been driven lower by a number of new regulations which includes the Volker Rule, but also includes the higher capital charges now imposed on hedged positions and the adverse treatment of such positions under stress testing. All of these are examples of the sorts of things that have driven up the cost of hedging the risk taken on principal trades, and thus driven down the volume of 'principal' trading in favor of more (though less liquid) 'agency' or 'riskless principal' trading ("A look at liquidity", *Top of Mind*, August 2, 2015).

It is difficult to see how these market conditions can improve much in 2016. The trends in post-trade visibility and CDS volumes noted above are unlikely to improve, nor is the regulatory treatment of trading books likely to improve. On the contrary, recent evidence suggests that the burdens of balance sheet restrictions imposed by the new regulatory environment continue to mount ("Why negative swap spreads might be here to stay", *The Credit Line*, Nov. 16, 2015). Nor do we see any reason to think regulatory remedies are imminent. We therefore do not have much reason to expect market liquidity conditions will improve in 2016.

Exhibit 9: Trading volumes per dollar of debt outstanding are falling



Source: SIFMA, FINRA TRACE, Goldman Sachs Global Investment Research.

10. Corporate earnings: Only a temporary loss of mojo

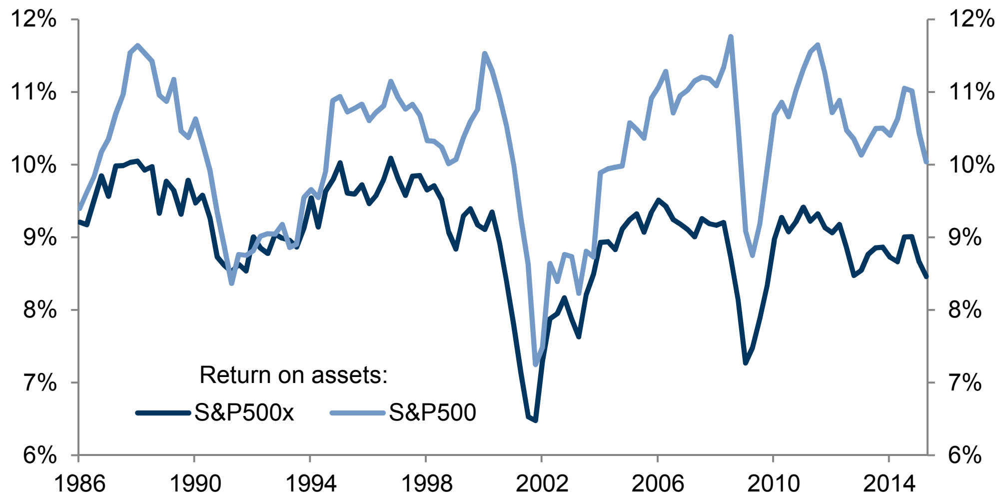
The US corporate sector has been on an interesting ride over the pre- and post-crisis era. After rising to all-time highs as a percentage of GDP in the pre-crisis period, corporate earnings plunged during the recession of 2008-2009, only to roar back in the early recovery years 2010-2011. Since then, however, real corporate revenue growth has been unsteady, as has earnings growth.

Indeed, Exhibit 10 shows that the last time companies in the S&P 500 experienced a similar peak/decline in ROAs was during the mid-to-late 1990s. This similarity is potentially troubling because it invites comparisons to the problems suffered by the corporate sector during the late-cycle stage of that expansion. Do recent trends suggest the corporate earnings cycle is losing its mojo? In our judgment, the answer is probably not, or at least if it is, it reflects a different set of underlying drivers.

For one, as we have shown in previous reports, operating margins during the late 1990s were flat-to-falling, whereas margins more recently have been flat-to-rising ("Is the corporate earnings cycle losing its mojo?" *Global Markets Daily*, Nov. 3, 2015). Second, if it is not margins weighing on ROAs, it must be top-line revenue growth. And indeed, for only the fifth time in 30 years, and the second time in the post-crisis period, the year-on-year growth rate of real corporate revenue for the median S&P500 company has been flat-to-negative. This pattern is the mirror image of the late 1990s, when margins were compressing but revenue growth was robust.

Indeed, the stable-to-rising rising trend in median margins is one of the more remarkable features of the corporate sector during the post-crisis period. The disappointment is real revenue growth, which has twice experienced a mild 'revenue recession' during the post-crisis period after never having experienced one over the prior 30 years. Thus, assuming margins are maintained, we see ample scope for renewed growth of revenue and earnings via the corporate sector's beta to firming US and global GDP growth. Put differently, these broad, top-down facts suggest little reason to fear that rising cost inefficiencies or declining pricing power are starting to weigh on earnings.

Exhibit 10: Recent declines in ROA for S&P 500 reflect weak revenues, not margins
Calculated as the median ROA for nonfinancial firms in each quarter. The dark blue line calculates ROA on the same universe of companies excluding the energy, metals and mining sectors.



Source: Compustat, Goldman Sachs Global Investment Research.

The Global Markets Team

Global Market Forecasts

Exhibit 11: Goldman Sachs market forecasts for 2016 and beyond

Market Forecasts

	*Current**	*End-2016*	*End-2017*	*End-2018*	*End-2019*
10 Year Bond Yields (%)					
Germany	0.52	0.80	1.20	1.75	2.10
Japan	0.28	0.60	0.90	1.00	1.20
UK	1.84	2.40	2.75	3.30	3.50
US	2.25	3.00	3.30	3.60	3.75
FX**					
EUR/$	1.06	0.95	0.80	0.80	0.80
EUR/GBP	0.70	0.65	0.57	0.57	0.57
AUD/$	0.71	0.67	0.70	0.70	0.70
$/JPY	123.4	130.0	140.0	140.0	140.0
$/CNY	6.38	6.60	6.80	6.80	6.80
$/BRL	3.81	4.30	4.52	4.74	4.88
$/INR	66.0	67.5	69.0	70.0	72.0
$/RUB	65.2	66.0	71.4	71.4	71.4
USD TWI	110.8	118.3	126.0	126.8	126.8
Credit (spreads, bp)					
US IG***	127	100	88	83	83
USD HY	619	504	439	412	412
EUR IG	135	93	84	79	79
Commodities					
WTI ($/bbl)	41.71	52	60	60	55
Brent ($/bbl)	43.57	56	65	65	60
Copper ($/mt)	4,684	4,500	4,500	4,500	5,000
Soybean (Cent/bu)	855	875	850	850	850
Corn (Cent/bu)	366	375	350	350	350

*Current prices as of November 17, 2015

Source: Goldman Sachs Global Investment Research.

**12 month forecast

*** Investment grade credit spreads to UST and bunds

Source: Goldman Sachs Global Investment Research.

Disclosure Appendix

Reg AC

I, Charles P. Himmelberg, hereby certify that all of the views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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